8EHQ-0594-13045 Sa

DESA
INTERNATIONAL

(A) Contains No CBI

May 3, 1994
Via Certified Mail

Document Processing Center (TS-790)
Attn: Section 8 (e) Coordinator
Office of Toxic Substances
U.S. Environmental Protection Agency
401 M. Street, S.W.
Washington, DC 20460

94 MAY 11 AM 7:48
RECEIVED
OPPT/CBIC

RE: DESA International, Inc., Bowling Green, Warren County, Kentucky.

Dear Sir or Madam:

This follow-up notice is being submitted in accordance with the Toxic Substance Control Act ("TSCA") including Section 8 (e). All contacts concerning this issue should be made with Gary Sanders, Plant Engineering Manager, 2701 Industrial Drive, Bowling Green, Kentucky 42102-9004, (502) 781-9600.

On April 20, 1994, I, on behalf of DESA International, Inc. ("DESA"), reported a possible release of kerosene at the DESA Bowling Green, Kentucky facility. The report was made in good faith and with an over-abundance of caution because DESA is not certain that the situation required reporting under TSCA Section 8 (e).

DESA maintains a 2,000 gallon above ground tank of kerosene at it's facility where approximately 1,100 gallons of kerosene appears to be missing. It is uncertain whether the kerosene was released into the environment. DESA's environmental consultant and various governmental personnel have reviewed the tank system and surrounding area and have yet to determine if the release occurred. Although a broken kerosene pipe and small amount of kerosene was found inside the building utility trench, so far, conclusive evidence of a release has not been found.

DESA is not aware of any known or anticipated acute or chronic health risk associated with the possible release, but provides with this correspondence Material Safety Data Sheets on the kerosene which may be of assistance in making such a determination. Accordingly, DESA is not aware of any medical attention necessary for exposed individuals, if any.

DESA believes that this report provides all necessary information required by your agency, including 40 CFR 355.40 (b) (3). If this is not your understanding, please contact me immediately.

Sincerely,

ORIGINAL

Gary D. Sanders
Plant Engineering Manager

RECEIVED 6/17/94

enclosure
cc: R. Harris
J. Phillips
TSCA Section 8(e) Coordinator, EPA Region IV, Attn: H. Guzman

Corporate Headquarters:
P.O. Box 90004 • 2701 Industrial Drive • Bowling Green, KY 42102-9004 • Phone (502) 781-9600

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Gary D. Sanders
Plant Engineering Manager
DESA International
P.O. Box 90004
2701 Industrial Drive
Bowling Green, Kentucky 42102-9004

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

AUG 16 1994

EPA acknowledges the receipt of information submitted by your organization under Section 8(e) of the Toxic Substances Control Act (TSCA). For your reference, copies of the first page(s) of your submission(s) are enclosed and display the TSCA §8(e) Document Control Number (e.g., 8EHQ-00-0000) assigned by EPA to your submission(s). Please cite the assigned 8(e) number when submitting follow-up or supplemental information and **refer to the reverse side of this page for "EPA Information Requests"** .

All TSCA 8(e) submissions are placed in the public files unless confidentiality is claimed according to the procedures outlined in Part X of EPA's TSCA §8(e) policy statement (43 FR 11110, March 16, 1978). Confidential submissions received pursuant to the TSCA §8(e) Compliance Audit Program (CAP) should already contain information supporting confidentiality claims. This information is required and should be submitted if not done so previously. To substantiate claims, submit responses to the questions in the enclosure "Support Information for Confidentiality Claims". This same enclosure is used to support confidentiality claims for non-CAP submissions.

Please address any further correspondence with the Agency related to this TSCA 8(e) submission to:

Document Processing Center (7407)
Attn: TSCA Section 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Washington, D.C. 20460-0001

EPA looks forward to continued cooperation with your organization in its ongoing efforts to evaluate and manage potential risks posed by chemicals to health and the environment.

Sincerely,

Terry R. O'Bryan
Risk Analysis Branch

Enclosure

13045 A

72-62-7825-01 MATERIAL SAFETY DATA SHEET	Ashland	Ashland Petroleum Company Division of Ashland Oil, Inc. P.O. BOX 391 ASHLAND, KENTUCKY 41114 (606) 329-3333	24-hour Emergency Telephone 1 (800) 274-5263 or 1-800-ASHLAND

000022

K 1 KEROSENE

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

****

Product Name: K 1 KEROSENE
CAS NUMBER: 8008-20-6

BROWNING OIL COMPANY
P O BOX 808

BOWLING GREEN KY 42101

ATTN: PLANT MGR/SAFETY DIR.

02 01 046 10811 -000

PRODUCT: 240550
INVOICE: 066931
INVOICE DATE: 09/17/91
TO: BROWNING OIL COMPANY
VARIOUS KY DESTINATIONS 40000

Data Sheet No: 0157413-004
Prepared: 06/21/89
Supersedes: 12/09/86

Contains No CBI

SECTION I-PRODUCT IDENTIFICATION

General or Generic ID: MIXTURE - ALIPHATIC AND AROMATIC HYDROCARBONS

DOT Hazard Classification: COMBUSTIBLE (173.115)

SECTION II-COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION.
SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (by WT)	PEL	TLV	Note
ALIPHATIC PETROLEUM DISTILLATES CAS #: 8008-20-6	100	400 PPM		(1)

Notes:

(1) NIOSH RECOMMENDS A LIMIT OF 100MG/M3 FOR 10 HR.

THIS PRODUCT CONTAINS 0.5-1.5% XYLENE MIX(CAS #1330-20-7),0.5-1.5% NAPHTHALENE(CAS #91-20-3), AND 0.4-1.2% BIPHENYL(CAS#92-52-4) WHICH APPEAR ON THE SARA SECTION 313 LIST OF TOXIC CHEMICALS.

TLV NOT ESTABLISHED FOR THIS MATERIAL.

SECTION III-PHYSICAL DATA

Boiling Point	for PRODUCT	304.00 - 572.00 Deg F (151.11 - 300.00 Deg C) @ 760.00 mm Hg
Vapor Pressure	for PRODUCT	0.70 mm Hg @ 68.00 Deg F (20.00 Deg C)
Specific Vapor Density	AIR = 1	5.0
Specific Gravity		.807 @ 77.00 Deg F (25.00 Deg C)
Percent Volatiles		100.00%
Evaporation Rate		SLOWER THAN ETHER
Appearance		CLEAR & COLORLESS
State		LIQUID
Form		HOMOG SOLN

SECTION IV-FIRE AND EXPLOSION INFORMATION

FLASH POINT 100.0 - 150.0 Deg F (37.8 - 65.6 Deg C)

EXPLOSIVE LIMIT (PRODUCT) LOWER - .7%

EXTINGUISHING MEDIA: REGULAR FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

WATER OR FOAM MAY CAUSE FROTHING WHICH CAN BE VIOLENT AND POSSIBLY ENDANGER THE LIFE OF THE FIREFIGHTER, ESPECIALLY IF SPRAYED INTO CONTAINERS OF HOT, BURNING LIQUID.

SPECIAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY HEAT, PILOT LIGHTS, OTHER FLAMES AND IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

NFPA CODES: HEALTH- 1 FLAMMABILITY- 2 REACTIVITY- 0

CONTINUED ON PAGE: 2

SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 400 PPM

EFFECTS OF ACUTE OVEREXPOSURE:

EYES - MAY CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.
SKIN - PROLONGED OR REPEATED CONTACT MAY CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS.
BREATHING - EXCESSIVE INHALATION OF VAPORS MAY CAUSE NASAL AND RESPIRATORY IRRITATION, CENTRAL NERVOUS SYSTEM EFFECTS INCLUDING DIZZINES, WEAKNESS, FATIGUE, NAUSEA, HEADACHE AND POSSIBLE UNCONSCIOUSNESS AND EVEN ASPHYXIATION.
SWALLOWING - MAY CAUSE GASTROINTESTINAL IRRITATION NAUSEA, VOMITING, AND DIARRHEA. ASPIRATION OF MATERIAL INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONIA WHICH MAY BE FATAL.

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

IF SWALLOWED: DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION

EFFECTS OF CHRONIC OVEREXPOSURE:

WHEN PRODUCTS OF SIMILAR COMPOSITION WERE TESTED ON LABORATORY ANIMALS, WEAK TO MODERATELY POSITIVE RESULTS WERE FOUND IN MOUSE SKIN CANCER STUDIES, MIXED AND INCONSISTENT RESULTS WERE FOUND IN MUTAGENICITY STUDIES, AND NEGATIVE RESULTS WERE FOUND IN RAT TERATOLOGY STUDIES.

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH:, STRONG OXIDIZING AGENTS

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

WASTE DISPOSAL METHOD:

SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DISPOSE OF REMAINING MATERIAL IN ACCORDANCE WITH APPLICABLE REGULATIONS.

LARGE SPILL: DESTROY BY LIQUID INCINERATION.

CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE SECTION II), A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, NEOPRENE, NITRILE RUBBER

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED.SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

CONTINUED ON PAGE: 3

Ashland Petroleum Company
Division of Ashland Oil, Inc.
P.O. BOX 391
ASHLAND, KENTUCKY 41114
(606) 329-3333

SECTION X-LABEL INFORMATION

WARNING!

COMBUSTIBLE LIQUID AND VAPOR

MAY CAUSE EYE AND SKIN IRRITATION.

INHALATION OF VAPOR MAY CAUSE IRRITATION OF NASAL AND RESPIRATORY PASSAGES.

SWALLOWING MAY CAUSE IRRITATION OF MOUTH, ESOPHAGUS, AND GASTROINTESTINAL SYSTEM AND MAY BE FATAL.

HANDLING & STORAGE:

KEEP AWAY FROM HEAT AND OPEN FLAME. USE OR STORE ONLY WITH ADEQUATE VENTILATION. MAINTAIN AMBIENT AIR CONCENTRATION(S) OF VOLATILE COMPONENT(S) BELOW PERMISSIBLE EXPOSURE LIMITS. AVOID CONTACT WITH EYES AND PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR SAFETY GLASSES OR GOGGLES, RESISTANT GLOVES, AND OTHER APPROPRIATE PROTECTIVE EQUIPMENT ESSENTIAL FOR YOUR OPERATION. MINIMIZE EXPOSURE THROUGH GOOD HYGIENIC PRACTICES. DO NOT TRANSFER TO UNLABELED CONTAINER. DO NOT USE CUTTING OR WELDING TORCH ON THIS CONTAINER (EVEN EMPTY). FOR INDUSTRIAL USE ONLY BEFORE USE, REVIEW MATERIAL SAFETY DATA SHEET FOR MORE DETAILED INFORMATION, INCLUDING CHRONIC HEALTH EFFECTS. 24-HOUR EMERGENCY NUMBER 1-800-ASHLAND.

FIRST AID:

EYES: FLUSH THOROUGHLY WITH WATER. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN: WASH THOROUGHLY WITH SOAP AND WATER.

INHALATION: IF AFFECTED, REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GET MEDICAL ATTENTION.

INGESTION: DO NOT INDUCE VOMITING. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

CHRONIC INFORMATION:

CONTAINS: PETROLEUM DISTILLATES.

*** COMPONENTS APPEAR IN SECTION II ***

72-62-7825-01 MATERIAL SAFETY DATA SHEET	Ashland	Ashland Petroleum Company Division of Ashland Oil, Inc. P.O. BOX 391 ASHLAND, KENTUCKY 41114 (606) 329-3333	24-hour Emergency Telephone 1 (800) 274-5263 or 1-800-ASHLAND

DEFINITIONS

This definition page is intended for use with Material Safety Data Sheets supplied by the Ashland Petroleum Company. Recipients of these data sheets should consult the OSHA Safety and Health Standards (29 CFR 1910), particularly subpart G - Occupational Health and Environmental Control, and subpart I - Personal Protective Equipment, for general guidance on control of potential Occupational Health and Safety Hazards.

SECTION I
PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: Chemical family or product description.

DOT HAZARD CLASSIFICATION: Product meets DOT criteria for hazards listed.

SECTION II
COMPONENTS

Components are listed in this section if they present a physical or health hazard and are present at or above 1% in the mixture. If a component is identified as a CARCINOGEN by NTP, IARC or OSHA as of the date on the MSDS, it will be listed and footnoted in this section when present at or above 0.1% in the product. Negative conclusions concerning carcinogenicity are not reported. Additional health information may be found in Section V. Components subject to the reporting requirements of Section 313 of SARA Title III are identified in the footnotes in this section, along with typical percentages. Other components may be listed if deemed appropriate.

Exposure recommendations are for components. OSHA Permissible Exposure Limits (PELs) and American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) appear on the line with the component identification. Other recommendations appear as footnotes.

SECTION III
PHYSICAL DATA

BOILING POINT: Of product if known. The lowest value of the components is listed for mixtures.

VAPOR PRESSURE: Of product if known. The highest value of the components is listed for mixtures.

SPECIFIC VAPOR DENSITY: Compared to AIR = 1. If Specific Vapor Density of product is not known, the value is expressed as lighter or heavier than air.

SPECIFIC GRAVITY: Compared to WATER = 1. If Specific Gravity of product is not known, the value is expressed as less than or greater than water.

pH: If applicable.

PERCENT VOLATILES: Percentage of material with initial boiling point below 425 degrees Fahrenheit and vapor pressure above 0.1mm Hg at 68 F.

EVAPORATION RATE: Indicated as faster or slower than ETHYL ETHER, unless otherwise stated.

SECTION IV
FIRE AND EXPLOSION DATA

FLASH POINT: Method identified.

EXPLOSION LIMITS: For product if known. The lowest value of the components is listed for mixtures.

HAZARDOUS DECOMPOSITION PRODUCTS: Known or expected hazardous products resulting from heating, burning or other reactions.

EXTINGUISHING MEDIA: Following National Fire Protection Association criteria.

SECTION IV (cont.)

FIREFIGHTING PROCEDURES: Minimum equipment to protect firefighters from toxic products of vaporization, combustion or decomposition in fire situations. Other firefighting hazards may also be indicated.

SPECIAL FIRE AND EXPLOSION HAZARDS: States hazards not covered by other sections.

NFPA CODES: Hazard ratings assigned by the National Fire Protection Association.

SECTION V
HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LIMIT: For product.

THRESHOLD LIMIT VALUE: For product.

EFFECTS OF ACUTE OVEREXPOSURE: Potential local and systemic effects due to single or short term overexposure to the eyes and skin or through inhalation or ingestion.

EFFECTS OF CHRONIC OVEREXPOSURE: Potential local and systemic effects due to repeated or long term overexposure to the eyes and skin or through inhalation or ingestion.

FIRST AID: Procedures to be followed when dealing with accidental overexposure.

PRIMARY ROUTE OF ENTRY: Based on properties and expected use.

SECTION VI
REACTIVITY DATA

HAZARDOUS POLYMERIZATION: Conditions to avoid to prevent hazardous polymerization resulting in a large release of energy.

STABILITY: Conditions to avoid to prevent hazardous or violent decomposition.

INCOMPATIBILITY: Materials and conditions to avoid to prevent hazardous reactions.

SECTION VII
SPILL OR LEAK PROCEDURES

Reasonable precautions to be taken and methods of containment, clean-up and disposal. Consult federal, state and local regulations for accepted procedures and any reporting or notification requirements.

SECTION VIII
PROTECTIVE EQUIPMENT TO BE USED

Protective equipment which may be needed when handling the product.

SECTION IX
SPECIAL PRECAUTIONS OR OTHER COMMENTS

Covers any relevant points not previously mentioned.

SECTION X
LABEL INFORMATION

Contains label information including physical and health hazard warnings, handling and first aid instructions appropriate for the product.

ADDITIONAL COMMENTS

Containers should be either reconditioned by CERTIFIED firms or properly disposed of by APPROVED firms. Disposal of containers should be in accordance with applicable laws and regulations. "EMPTY" drums should not be given to indi-

Material Safety Data Sheet
Kerosene

PHIBRO ENERGY USA, INC.
500 DALLAS AVE., SUITE 3200
HOUSTON, TX 77002

PHIBRO ENERGY, INC.
500 NYALA FARMS RD
WESTPORT, CT 06880

Emergency Phone Numbers
24 Hour Emergency 713-923-6641
Chemtrec Emergency 800-424-9300

General Assistance
Medical Assistance 713-797-0395
General Assistance 713-646-5135

I. GENERAL INFORMATION

Trade Name
Kerosene
Chemical Family
Petroleum Distillate
Aliphatic & Aromatic Hydrocarbon
Synonyms
K-1 Kerosene, K-2 Kerosene,
Paraffininc Kerosene

CAS Registry Number
8008-20-6
DOT Proper Shipping Name
Kerosene
DOT Hazard Class/Packaging Group
3 Flammable/III
DOT Identification Number
UN 1223
Reportable Quantity
Naphthalene-100 lb

II. SUMMARY OF HAZARDS

Danger! Untreated Product May Contain or Release Hydrogen Sulfide. H_2S is a highly toxic, highly flammable gas which can be fatal if inhaled at certain concentrations. Danger! Exhaust fumes have been Reported to be an Occupational hazard due to NIOSH-reported potential carcinogenic properties. May cause irritation to eyes, skin and respiratory system. Avoid liquid, mist and vapor contact. Harmful or fatal if swallowed. Aspiration hazard, can enter lungs and cause damage. May cause irritation or be harmful if inhaled or absorbed through the skin. Avoid prolonged or repeated skin contact. Flammable Liquid. Vapors may explode.

III. HAZARDOUS INGREDIENTS

Kerosene is a complex blend of primarily aliphatic and aromatic hydrocarbons derived from petroleum processing. The composition varies according to specifications.

Component	CAS No.	Concentration (%)
Naphthalene	91-20-3	1 - 3 %

IV. PHYSICAL DATA

Boiling Point: 320-580° F
Melting Point: not applicable
Vapor Density (air=1): 4-7
Solubility in Water: Negligible
Appearance and Odor: Clear to straw colored with kerosene odor
Flash Point: 100° F min

Specific Gravity: 0.79-0.84 @60° F
Vapor Pressure: <0.1 psi @ 100° F
Percent Volatile: Negligible
Autoignition Temperature: 400° F

V. FIRE AND EXPLOSION HAZARD DATA (cont'd)

Flammability Limits in Air
Lower Explosive Limit: 0.7% Upper Explosive Limit: 5.0%
NFPA Classification
Health: Slight (1) Fire: Moderate (2)
Reactivity: Stable (0) Specific Hazard: not applicable

Basic Firefighting Procedures
Flammable Liquid. Use dry chemical, foam or carbon dioxide to extinguish the ble fire. Consult foam manufacturer for appropriate media, application rates and water/foam ratio. Water can be used to cool fire-exposed containers, structures and to protect personnel. If a leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak. Use water to flush spills away from sources of ignition. Do not flush down public sewers.
Unusual Fire and Explosion Hazards
Dangerous when exposed to heat or flame. Vapors form flammable or explosive mixtures with air at room temperature. Vapor or gas may spread to distant ignition sources (pilot lights, welding equipment, electrical equipment, etc.) and flash back. Vapors may accumulate in low areas. Vapors may concentrate in confined areas. Flowing product can be ignited by self generated static electricity. Use adequate grounding to prevent static buildup. Runoff to sewer may cause fire or explosion hazard. Containers may explode in heat of fire. Irritating or toxic substances may be emitted upon thermal decomposition. For fires involving this material, do not enter any enclosed or confined space without proper protective equipment, which may include NIOSH approved self-contained breathing apparatus with full face mask. Clothing, rags or similar organic material contaminated with this product and stored in a closed space may undergo spontaneous combustion. Transfer to and from commonly grounded containers.

VI. REACTIVITY INFORMATION

Stability: Stable under normal conditions of use
Incompatibility: Avoid strong oxidizing agents (peroxide, dichromate, permanganate, chlorine, etc.), strong acids, caustics and halogens.
Hazardous Polymerization: Will not occur
Hazardous Reactions/Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide and reactive hydrocarbons (aldehydes, aromatics, etc.) compounds
Conditions to Avoid: Heat, sparks, open flame, static electricity or any other potential ignition sources should be avoided. Prevent vapor accumulation. Do not switch load.

VII. HEALTH HAZARD INFORMATION

Product Listed as a Carcinogen or Potential Carcinogen by:
NTP - No IARC - No OSHA - No Other - NIOSH*
**NIOSH Current Intelligence Bulletin 50 reports a potential occupational carcinogenic hazard exists due to human exposure to diesel exhaust fumes.
Target Organs: Skin, respiratory system

VII. HEALTH HAZARD INFORMATION (cont'd)

Primary Routes of Entry: Eye or skin contact, ingestion, inhalation

Occupational Exposure Limits

Compound	Source	Year	Adopted Value for Time Period		
Hydrogen Sulfide	OSHA-PEL	1989	TWA	10 ppm	8 hour
	ACGIH-TLV	1989	TWA	10 ppm	8 hour
	OSHA-PEL	1989	STEL	15 ppm	15 min
	ACGIH-TLV	1989	STEL	15 ppm	15 min
	NIOSH-REL	1989	CL	10 ppm	10 min
Naphtha, (Petroleum Distillates)	OSHA-PEL	1989	TWA	400 ppm	8 hour
	NIOSH-REL	1989	TWA	350 mg/m3	8 hour
	NIOSH-REL	1989	CL	1800 mg/m3	15 min
Naphthalene	OSHA-PEL	1989	TWA	10 ppm	8 hour
	ACGIH-TLV	1989	TWA	10 ppm	8 hour
	OSHA-PEL	1989	STEL	15 ppm	15 min
	ACGIH-TLV	1989	STEL	15 ppm	15 min

Effects and Hazards of Eye Contact
May cause severe irritation, redness, tearing, blurred vision and conjunctivitis.

Effects and Hazards of Skin Contact
Prolonged or repeated contact may cause moderate irritation, defatting (cracking), redness, itching, inflammation, dermatitis and possible secondary infection. High pressure skin injections are SERIOUS MEDICAL EMERGENCIES. Injury may not appear serious at first. Within a few hours, tissues will become swollen, discolored and extremely painful. See Notes to Physician section.

Effects and Hazards of Inhalation
Nasal and respiratory tract irritation, central nervous system effects including excitation, euphoria, contracted eye pupils, dizziness, drowsiness, blurred vision, fatigue, nausea, headache, loss of reflexes, tremors, convulsions, seizures, loss of consciousness, coma, respiratory arrest and sudden death could occur as a result of long term and/or high concentration exposure to vapors. May also cause anemia and irregular heart rhythm. Repeated or prolonged exposure may cause behavioral changes. NIOSH Current Intelligence Bulletin 50 reports a potential occupational carcinogenic hazard exists due to human exposure to diesel exhaust.

Effects and Hazards of Ingestion
This product may be harmful or fatal if swallowed. This product may cause nausea, vomiting, diarrhea and restlessness. DO NOT INDUCE VOMITING. Aspiration into the lungs can cause severe chemical pneumonitis or pulmonary edema/hemorrhage, which can be fatal. May cause gastrointestinal disturbances. Symptoms may include irritation, depression, vomiting and diarrhea. May cause harmful central nervous system effects, similar to those listed under "inhalation".

Medical Conditions Aggravated by Exposure
Preexisting eye, skin, heart, central nervous system and respiratory disorders may be aggravated by exposure to this product.

Toxicological Information
DIESEL EXHAUST FUMES have been reported to be a potential occupational

VII. HEALTH HAZARD INFORMATION (cont'd)

Toxicological Information (cont'd)
carcinogen in humans by NIOSH Current Intelligence Bulletin 50.

HYDROGEN SULFIDE can affect the body if it is inhaled or if it comes into contact with the eyes, skin, nose or throat. It can also affect the body if it is swallowed. It is colorless and has the odor of rotten eggs. However, its odor cannot be used as an indication of its presence since one of the first effects of H_2S exposure is the loss of the sense of smell. Inhalation of high concentrations of hydrogen sulfide, 1000 to 2000 ppm, may cause coma after a single breath and may be rapidly fatal, convulsions can also occur. Hydrogen sulfide gas is a rapidly acting systemic poison which causes respiratory paralysis with consequent asphyxia at high concentrations (500 to 1000 ppm). A case of polyneuritis and encephalopathy from one day's exposure to a concentration insufficient to cause loss of consciousness has been reported. It irritates the eyes and respiratory tract at lower concentrations (50 to 500 ppm). Pulmonary edema and bronchial pneumonia may follow prolonged exposure at concentrations exceeding 250 ppm. Exposure to concentrations of hydrogen sulfide around 50 ppm for one hour may produce rhinitis, pharyngitis, bronchitis, pneumonitis, acute conjunctivitis with pain, lacrimation and photophobia, in severe form this may progress to keratoconjunctivitis and vesiculation of the corneal epithelium. In lower concentrations, hydrogen sulfide may cause headache, fatigue, irritability, insomnia, and gastrointestinal disturbances, as well as central nervous system disturbances, causing excitation and dizziness. Repeated exposure to hydrogen sulfide results in increased susceptibility, so that eye irritation, cough and systemic effects may result from concentrations previously tolerated without any effect.

NAPHTHALENE can affect the body if it is inhaled, comes into contact with the eyes or the skin or if it is swallowed. Naphthalene vapor causes hemolysis and eye irritation, it may cause cataracts. Severe intoxication from ingestion of the solid results in characteristic manifestations of marked intravascular hemolysis and its consequences, including potentially fatal hyperkalemia. Initial symptoms include eye irritation, headache, confusion, excitement, malaise, profuse sweating, nausea, vomiting, abdominal pain, and irritation of the bladder. There may be progression to jaundice, hematuria, hemoglobinuria, renal tubular blockage, and acute renal shutdown. Hematologic features include red cell fragmentation, icterus, sever anemia with nucleated red cells, leukocytosis, and dramatic decreases in hemoglobin, hematocrit and red cell count; sometimes there is formation of Heinz bodies and methemoglobin. Individuals with a deficiency of glucose-6-phosphate dehydrogenase in erythrocytes may be more susceptible to hemolysis by naphthalene. Cataracts and ocular irritation have been produced experimentally in animals and have been described in humans. Of 21 workers exposed to high concentrations of fume or vapor for 5 years, 8 had peripheral lens opacities; in other studies, no abnormalities of the eyes have been detected in workers exposed to naphthalene for several years. The vapor causes eye irritation at 15 ppm. Eye contact with the solid may result in conjunctivitis, superficial injury to the cornea, chorioretinitis, scotoma, and

VII. HEALTH HAZARD INFORMATION (cont'd)

Toxicological Information (cont'd)
diminished visual acuity. Naphthalene on the skin may cause hypersensitivity dermatitis, chronic dermatitis is rare.

PETROLEUM DISTILLATES can affect the body if they are inhaled, come in contact with the eyes or skin or are swallowed. The vapors of petroleum distillates are mild narcotics and mucous membrane irritants. There have been few toxicologic studies, either on animals or man. While 4000 to 7000 ppm are tolerated for 1 hour by human subjects, symptoms of narcosis, such as dizziness and drowsiness, occur at these concentrations. Continuing exposure may produce signs of inebriation, followed by headache or nausea. Exposure at 10,000 to 20,000 ppm is regarded as immediately hazardous to life. The higher boiling fractions may produce irritation of the eyes, nose and throat in addition to symptoms of mild narcosis. Mouse skin painting studies have shown that middle distillates can cause skin cancer when repeatedly applied and never washed from the skin. A few studies have shown that washing the animal's skin between applications greatly reduces the carcinogenic effect of some distillates. Some components of distillates have produced kidney damage in oral and inhalation exposure studies. Middle distillates were found to be mutagenic in some tests and negative in the majority of others. The exact relationship between these results and human health is not known. Chronic health effects would not be expected as long as good personal hygiene and proper safety precautions are used. No chronic systemic effects have been reported from widespread industrial use.

VIII. EMERGENCY AND FIRST AID INFORMATION

Special H2S Warning
Care must be taken by those who are rendering aid to the victim because H2S may be in the area and may also overcome the rescuers. Supplied air breathing equipment should be used by rescuers unless it has been determined that the area is free of hydrogen sulfide.
Treatment for Eye Contact
Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if pain or redness continues.
Treatment for Skin Contact
Wash exposed area thoroughly with soap and water. Remove contaminated clothing promptly and launder before reuse. Contaminated leather goods should be discarded. If irritation persists or symptoms described in the MSDS develop, seek medical attention. High pressure skin injections are SERIOUS MEDICAL EMERGENCIES. Get immediate medical attention.
Treatment for Inhalation
Remove to fresh air. If breathing is difficult, ensure clear airway and administer oxygen. If not breathing, apply artificial respiration or cardiopulmonary resuscitation. Keep person warm, quiet and get medical attention.
Treatment for Ingestion
Never give anything by mouth to an unconscious person. DO NOT induce vomiting. Aspiration of material into the lungs due to vomiting can

VIII. EMERGENCY AND FIRST AID INFORMATION (cont'd)

Treatment for Ingestion (cont'd)
cause chemical pneumonitis which can be fatal. Give vegetable oil or charcoal slurry to retard absorption. If spontaneous vomiting occurs, keep head below hips to prevent aspiration of liquid into lungs and monitor for breathing difficulty. SEEK IMMEDIATE MEDICAL ATTENTION. Keep person warm and quiet.

Notes to Physician
In case of ingestion, gastric lavage with activated charcoal can be used promptly to prevent absorption. Consideration should be given to the use of an intratracheal tube, to prevent aspiration. Irregular heart beat may occur, use of adrenalin is not advisable. Individuals intoxicated by the product should be hospitalized immediately, with acute and continuing attention to neurological and cardiopulmonary function. Positive pressure ventilation may be necessary. After the initial episode, individuals should be followed for changes in blood variables and the delayed appearance of pulmonary edema and chemical pneumonitis. Such patients should be followed for several days or weeks for delayed effects, including bone marrow toxicity, hepatic and renal impairment. Individuals with chronic pulmonary disease will be more seriously impaired, and recovery from inhalation exposure may be complicated. In case of skin injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss.

IX. PRECAUTIONARY MEASURES

Respiratory Protection
If workplace exposure limits for product or components are exceeded, NIOSH equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.

Eye Protection
Keep away from eyes. Eye contact can be avoided by wearing safety glasses or chemical splash goggles. Do not wear contact lenses when working around this product.

Skin Protection
Keep away from skin. Skin contact can be minimized by wearing protective gloves such as neoprene, nitrile-butadiene rubber, etc. and, where necessary, impervious clothing and boots. Leather goods contaminated with this product should be discarded. A source of clean water should be available in the work area for flushing eyes and skin.

Ventilation
Avoid breathing mists and vapor. Use in well ventilated area. In confined space, mechanical ventilation may be necessary to reduce vapor concentrations to levels below the allowable exposure limits.

Other Precautionary Measures
Tanks, vessels, or other confined spaces which have contained product should be freed of vapors before entering. Because H_2S can accumulate in tanks, vessels, and bulk transport compartments, personnel should stand upwind, keep their faces at least two feet from compartment openings, and avoid breathing vapors when opening hatches and dome covers. The container should be checked with an explosimeter for

IX. PRECAUTIONARY MEASURES (cont'd)

Other Precautionary Measures (cont'd)
safety and an oxygen meter to ensure a safe breathing atmosphere before entry. Empty containers may contain toxic, flammable/combustible or explosive residues or vapors. Do not cut, grind, drill, weld, or reuse empty containers that contained this product. Do not transfer this product to another container unless the container receiving the product is labeled with proper DOT shipping name, hazard class and other information that describes the product and its hazards.
Precautions to be Taken in Handling and Storing
Store in tightly closed containers in cool, dry, isolated and well ventilated area away from heat, sources of ignition and incompatible materials. Use non-sparking tools and explosion proof equipment. Ground lines, containers, and other equipment used during product transfer to reduce the possibility of a static induced spark. Do not "switch" load (load into containers which previously contained gasoline or other low flash material) because of possible accumulation of a static charge resulting in a source of ignition. Use good personal hygiene practices. After handling this product, wash hands before eating, drinking, smoking or using toilet facilities.

X. SPILL AND LEAK PROCEDURES

Precautions in Case of a Spill or Release
If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Combustible Liquid. Review Fire and Explosion Hazard Data before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g., by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 800-424-8802. For highway or railway spills, contact Chemtrec at 800-424-9300.
Waste Disposal Method
Dispose of material in accordance with local, county, state and federal regulations. Contact state and federal regulators to determine whether the material should be classified as a hazardous waste or industrial waste and handled accordingly. Use licensed transporter and disposal facility.

XI. SARA TITLE III INFORMATION

Section 302/304 Extremely Hazardous Substances
Hydrogen Sulfide

XI. SARA TITLE III INFORMATION (cont'd)

Section 311 Hazard Category					
Acute	Chronic	Fire	Pressure	Reactive	Not Applicable
X	X	X			

Section 313 Toxic Chemicals	
Naphthalene	3 % Maximum

XII. LABELING INFORMATION

Danger! Untreated Product May Contain or Release Hydrogen Sulfide. H_2S is a highly toxic, highly flammable gas which can be fatal if inhaled at certain concentrations. Danger! Exhaust fumes have been Reported to be an Occupational hazard due to NIOSH-reported potential carcinogenic properties. May cause irritation to eyes, skin and respiratory system. Avoid liquid, mist and vapor contact. Harmful or fatal if swallowed. Aspiration hazard, can enter lungs and cause damage. May cause irritation or be harmful if inhaled or absorbed through the skin. Avoid prolonged or repeated skin contact. Flammable Liquid. Vapors may explode.

If swallowed, do not induce vomiting, aspiration hazard. Call physician immediately. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Wash skin with soap and plenty of water. Product soaked clothing should be removed and laundered before reuse. Read Emergency and First Aid Information section of the MSDS.

Use only in well ventilated locations. Keep away from heat, spark and flames. In case of fire, use water spray, foam, dry chemical or carbon dioxide as described in the Fire and Explosion Hazard Data section of the MSDS. Do not pressurize, cut, weld, braze, solder, drill on or near this container. "Empty" container contains residue (liquid and/or vapor) and may explode in heat of a fire.

For industrial use only. Keep out of reach of children. Failure to use caution may cause serious injury or illness. Never siphon by mouth. Do not use as a cleaning solvent.

DISCLAIMER

The information, recommendations and suggestions herein were compiled from reference material and other sources believed to be reliable. However, the MSDS's accuracy or completeness is not guaranteed by Phibro Energy, Inc. or its affiliates, nor is any responsibility assumed or implied for any loss or damage resulting from inaccuracies or omissions. Since conditions of use are beyond our control, no warranties of merchantability or fitness for a particular purpose are expressed or implied. This MSDS is not intended as a license to operate under, or recommendation to infringe on, any patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

Prepared By: Sue Bottom, Health, Safety and Environmental

CECATS\TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA:
Submission # 8EHQ- 0594 - 13045 SEQ. A

TYPE: (INT.) SUPP FLWP

SUBMITTER NAME: DESA International, Inc.

SUB. DATE: 05/03/94 OTS DATE: 05/11/94 CSRAD DATE: 06/17/94

INFORMATION REQUESTED: FLWP DATE:
0501 NO INFO REQUESTED
0502 INFO REQUESTED (TECH)
0503 INFO REQUESTED (VOL ACTIONS)
0504 INFO REQUESTED (REPORTING RATIONALE)

DISPOSITION:
(0639) REFER TO CHEMICAL SCREENING
0678 CAP NOTICE

VOLUNTARY ACTIONS:
(0401) NO ACTION REPORTED
0402 STUDIES PLANNED/UNDERWAY
0403 NOTIFICATION OF WORKER/OTHERS
0404 LABEL/MSDS CHANGES
0405 PROCESS/HANDLING CHANGES
0406 APP./USE DISCONTINUED
0407 PRODUCTION DISCONTINUED
0408 CONFIDENTIAL

CHEMICAL NAME:

CAS#
8008-20-6

INFORMATION TYPE:		P F C	INFORMATION TYPE:		P F C	INFORMATION TYPE:		P F C
0201	ONCO (HUMAN)	01 02 04	0216	EPI/CLIN	01 02 04	0241	IMMUNO (ANIMAL)	01 02 04
0202	ONCO (ANIMAL)	01 02 04	0217	HUMAN EXPOS (PROD CONTAM)	01 02 04	0242	IMMUNO (HUMAN)	01 02 04
0203	CELL TRANS (IN VITRO)	01 02 04	~~0218~~	~~HUMAN EXPOS (ACCIDENTAL)~~	~~01 02 04~~	[redacted]	CHEM/PHYS PROP	01 02 04
0204	MUTA (IN VITRO)	01 02 04	0219	HUMAN EXPOS (MONITORING)	01 02 04	0244	CLASTO (IN VITRO)	01 02 04
0205	MUTA (IN VIVO)	01 02 04	0220	ECO/AQUA TOX	01 02 04	0245	CLASTO (ANIMAL)	01 02 04
0206	REPRO/TERATO (HUMAN)	01 02 04	(0221)	ENV. OCCC/REL/FATE	01 02 04	0246	CLASTO (HUMAN)	01 02 04
0207	REPRO/TERATO (ANIMAL)	01 02 04	0222	EMER INCI OF ENV CONTAM	01 02 04	0247	DNA DAM/REPAIR	01 02 04
0208	NEURO (HUMAN)	01 02 04	0223	RESPONSE REQEST DELAY	01 02 04	0248	PROD/USE/PROC	01 02 04
0209	NEURO (ANIMAL)	01 02 04	0224	PROD/COMP/CHEM ID	01 02 04	(0251)	MSDS	01 02 04
0210	ACUTE TOX. (HUMAN)	01 02 04	0225	REPORTING RATIONALE	01 02 04	0299	OTHER	01 02 04
0211	CHR. TOX. (HUMAN)	01 02 04	0226	CONFIDENTIAL	01 02 04			
0212	ACUTE TOX. (ANIMAL)	01 02 04	0227	ALLERG (HUMAN)	01 02 04			
0213	SUB ACUTE TOX (ANIMAL)	01 02 04	0228	ALLERG (ANIMAL)	01 02 04			
0214	SUB CHRONIC TOX (ANIMAL)	01 02 04	0239	METAB/PHARMACO (ANIMAL)	01 02 04			
0215	CHRONIC TOX (ANIMAL)	01 02 04	0240	METAB/PHARMACO (HUMAN)	01 02 04			

TRIAGE DATA:

NON-CBI INVENTORY	ONGOING REVIEW	SPECIES	TOXICOLOGICAL CONCERN:	USE:	PRODUCTION:
(YES (CONTINUE)	YES (DROP/REFER)	[redacted]	LOW		
NO (DROP)	NO (CONTINUE)		MED		
DETERMINE	REFER:		HIGH		

COMMENTS: Non-Cap